



## **Beyond MRO:**

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*Point-of-Use Industrial Vending Solutions for  
Inventory Control and Cost Containment*

***Hisco***<sup>®</sup>  
*Fast Friendly Service*

## I. Introduction: Why Vending?

THE GOAL OF INVENTORY MANAGEMENT IS TO HAVE THE RIGHT STOCK IN THE RIGHT PLACE AT THE RIGHT TIME—ALL WHILE MINIMIZING INVENTORY-RELATED COSTS.



*Without exceptional inventory management practices, hidden costs and inefficiencies can significantly burden a manufacturer's productivity and return on investment (ROI).*

An effective inventory management system can mean the difference between profitable and unprofitable production processes and is critical for staying competitive in a manufacturing environment with increasingly thin margins. Without exceptional inventory management practices, hidden costs and inefficiencies can significantly burden a manufacturer's productivity and return on investment (ROI). Managers may not have a clear, real-time picture of the inventory they are carrying, leading to costly stock-outs or procurement funds that get tied up in non-productive inventory carrying costs; and they may lack the insight to precisely track and analyze the actual materials costs related to specific production processes.



Too often, procurement and operations managers assume that inventory-related problems are an unavoidable cost of business. Point-of-use (POU) vending not only addresses these problems, but also positions manufacturers for continuous improvement in the future. By integrating vending solutions into their supply-chain management systems, companies are empowered with the knowledge and control to effectively manage their complex inventory requirements. Vending gives managers access to real-time information related to inventory costs, availability, and processes. This data allows manufacturers to work with their vending partner to identify and streamline process inefficiencies and to reduce inventory-related expenses. And while vending has traditionally been used to manage maintenance, repair, and operations

(MRO) supplies, manufacturers are beginning to realize its potential as a more powerful supply-chain management tool—particularly when it comes to the mission-critical, high-dollar products used on a bill of materials (BOM). The direct and measurable result is significant savings in both overall spend and employee time devoted to inventory management issues.

## II. A Closer Look at Vending Fundamentals

VENDING TECHNOLOGY HAS EVOLVED SIGNIFICANTLY FROM THE RELATIVELY SIMPLE MACHINES USED TO DISPENSE CANDY AND SODA.



*Managers determine who has access to materials and tools based on employee, department, shift, cost center, or other parameters.*

Machines designed for the manufacturing environment can house a wide variety of products, and can be placed virtually anywhere, whether in a centralized location, or at an individual work cell—bringing the inventory to the operator, instead of the reverse. Managers determine who has access to materials and tools based on employee, department, shift, cost center, or other parameters. Once the parameters are set, employees can access the materials by entering an identifying number into the machine, swiping a magnetic card, or via radio frequency identification (RFID) technology. The vending unit then dispenses the supplies requested. Access and usage are tracked via the machine's software, which generates real-time inventory information that is automatically supplied to the vending partner for restocking.

### WHAT PRODUCTS ARE VENDIBLE?

The wide range of machines available means that a vending program can be customized to fit almost any need. Options range from traditional helix-coil dispensers to machines with more sophisticated designs, such as those with RFID product tracking and weight-based operations. And while vending's early applications focused on MRO supplies and tools, the flexibility of new vending technologies opens up great potential for its use in managing mission-critical materials. For example, some BOM products like solder paste and adhesives are highly temperature-sensitive, and vending machines can offer temperature-controlled storage that can be located close to the point of use on the production floor, which can reduce the exposure time of these materials. Vending can also provide automated management of BOM materials that have a limited shelf life, with machines that can be programmed to dispense older materials first and automatically lock down expired materials. For high-dollar BOM products that may be susceptible to theft, vending's access controls give managers the ability to limit who can obtain how much of any material, significantly improving inventory shrinkage. And for lot-controlled BOM materials, vending's integrated software tools enable easy tracking of lots and production runs.

Vending can also be a powerful tool for managing assets. Tools, equipment, and shared fixtures can be tracked so that managers and line leads know who has what item, and when it's due back. In addition, prompts for employees can

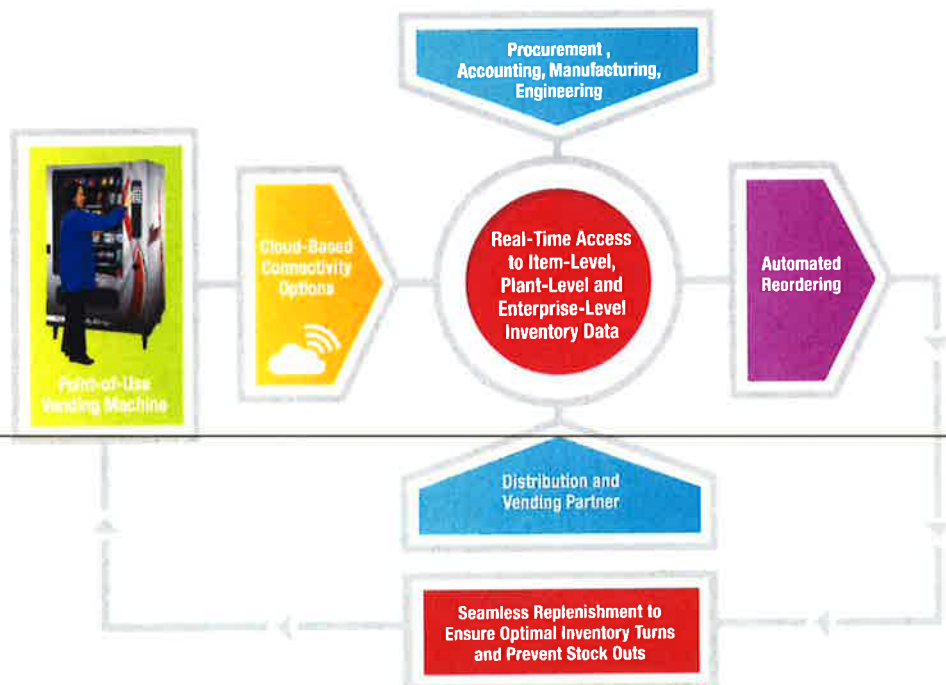
*The wide range of machines available means that a vending program can be customized to fit almost any need.*

be set for both check-out and check-in; for example, a check-out prompt might remind an employee when the asset is due back, and a check-in prompt might inquire about the condition of the tool. Responses to these prompts can then initiate any necessary next steps: if an employee notes that a tool is broken or in need of calibration, an email request to maintenance or metrology is automatically generated. The system then keeps the item locked down until it is repaired or calibrated.

### HOW IS INVENTORY TRACKED?

Point-of-use vending machines are linked (either wirelessly or via a direct connection through a company network) to the vending partner's data-management software, which provides access to real-time information and administration on any web-enabled device. The software serves as the administrative portal for the machines themselves, allowing the manufacturer to adjust how the machines are used and who has access; and it can, at the manufacturer's request, be integrated with their own ERP system. The software also allows for the full automation of purchase orders and restocking: when inventory drops to a specified level, the vending partner receives an automatic alert to restock, with no action required on the part of the manufacturer. Furthermore, it gives operations managers and procurement and finance departments real-time access to a wide range of customizable standard reports, providing full visibility of key metrics related to consumption and inventory. Reports can be automatically emailed to managers on a regular schedule and allow for employee-level, item-level, line-level and enterprise-level data views. These reports offer precise information that can be used to track spend, plan for bids, and monitor employee efficiency for training purposes.

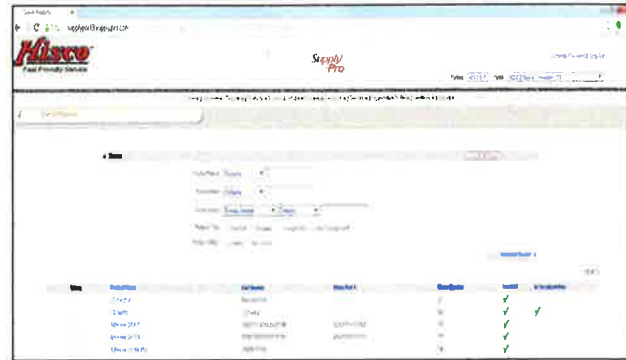
**Integrated Vending Solutions for Seamless Inventory Control and Real-Time Data Access**



Raw Data Transactions Report Shows Takes, Refills, Inventories, etc.

Date	Time	User	Item	Quantity	Location
2018-01-15	10:30	J. Smith	Item A	1	Machine 101
2018-01-15	11:45	M. Jones	Item B	2	Machine 102
2018-01-16	08:00	A. Brown	Item A	3	Machine 101
2018-01-16	09:15	S. Green	Item C	1	Machine 103
2018-01-16	14:30	D. White	Item B	1	Machine 102
2018-01-17	07:45	K. Black	Item A	2	Machine 101
2018-01-17	13:20	L. Gray	Item D	1	Machine 104
2018-01-18	06:30	P. Blue	Item A	1	Machine 101
2018-01-18	12:00	R. Yellow	Item B	2	Machine 102
2018-01-19	09:45	T. Purple	Item C	1	Machine 103
2018-01-19	15:10	V. Pink	Item A	3	Machine 101
2018-01-20	08:20	W. Orange	Item B	1	Machine 102
2018-01-20	11:55	X. Green	Item C	2	Machine 103
2018-01-21	07:10	Y. Blue	Item A	1	Machine 101
2018-01-21	13:40	Z. Yellow	Item B	2	Machine 102
2018-01-22	09:00	AA. Purple	Item C	1	Machine 103
2018-01-22	14:25	BB. Pink	Item A	3	Machine 101
2018-01-23	08:45	CC. Orange	Item B	1	Machine 102
2018-01-23	12:15	DD. Green	Item C	2	Machine 103
2018-01-24	07:30	EE. Blue	Item A	1	Machine 101
2018-01-24	13:50	FF. Yellow	Item B	2	Machine 102
2018-01-25	09:20	GG. Purple	Item C	1	Machine 103
2018-01-25	14:40	HH. Pink	Item A	3	Machine 101
2018-01-26	08:10	II. Orange	Item B	1	Machine 102
2018-01-26	11:35	JJ. Green	Item C	2	Machine 103
2018-01-27	07:55	KK. Blue	Item A	1	Machine 101
2018-01-27	13:10	LL. Yellow	Item B	2	Machine 102
2018-01-28	09:30	MM. Purple	Item C	1	Machine 103
2018-01-28	14:55	NN. Pink	Item A	3	Machine 101
2018-01-29	08:05	OO. Orange	Item B	1	Machine 102
2018-01-29	12:30	PP. Green	Item C	2	Machine 103
2018-01-30	07:20	QQ. Blue	Item A	1	Machine 101
2018-01-30	13:45	RR. Yellow	Item B	2	Machine 102
2018-01-31	09:15	SS. Purple	Item C	1	Machine 103
2018-01-31	14:35	TT. Pink	Item A	3	Machine 101

Product Portal Manages Items Available in a Machine and Controls Critical Parameters Like Expiration Dates



### III. The Benefits of Vending

THE BENEFITS ARE CLEAR: VENDING ENABLES MANUFACTURERS TO TRACK AND MANAGE INVENTORY WITH PRECISION AND FLEXIBILITY, WHICH IN TURN IMPROVES WORKFLOW AND MINIMIZES WASTE.



The less time and money spent on inventory management, the more that is available for the core mission, allowing manufacturers to deliver increased value to their customers. Specifically, vending minimizes inventory-related costs and inefficiencies by:

- Substantially reducing or eliminating employee time spent tracking and maintaining inventory levels and preparing purchase orders.
- Eliminating the possibility of costly overstock, stock-outs, and duplicate purchase orders.
- Lowering shipping costs by allowing vendors to plan ahead for consolidated shipments.
- Increasing employee accountability and decreasing the likelihood of hoarding and home migration by tracking access and usage.
- Reducing time spent off the production floor by giving employees quick, direct access to the tools and supplies they need close to their point of use.
- Simplifying processes related to safety and regulatory concerns, for example by locking down expired materials or by automatically generating alerts when tools are in need of repair or calibration.
- Controlling storage temperature for reactive products.
- Providing managers access to precise, real-time data on inventory and consumption.

How do these benefits translate to the bottom line? One Fortune 100 manufacturer of agricultural and construction machinery reduced its total purchase orders at a major facility from more than 800 per year to fewer than 60, a reduction of more than 90%, and an obvious boon to efficiency within its purchasing organization. And another leading manufacturer of automotive parts realized a 35% reduction in annual consumption after implementing a vending program. Vending offers direct, measurable results such as these, and also positions companies to remain flexible and competitive in today's highly dynamic manufacturing environment.

## IV. The Manufacturer-Vendor Partnership

### WHAT SHOULD A MANUFACTURER EXPECT FROM A VENDING PARTNER?



*When considering a vending partnership, manufacturers should look for one that offers flexibility, ongoing support and transparency.*

By integrating point-of-use vending into their supply-chain management systems, manufacturers can maximize the benefits of their relationship with a distribution partner. However, manufacturers should be aware that vending is not a one-size-fits-all solution, and the right distributor will work as a partner to optimize the value realized through a vending program. When considering a vending partnership, manufacturers should look for one that offers flexibility, ongoing support and transparency. A good vending partner should:

- Work with the manufacturer to examine current supply-chain processes and identify problem areas.
- Coordinate with key managers to use this analysis in determining the best fit for vending within current operations.
- Install the machines and software, and train employees at all levels to use the equipment and run reports.
- Restock inventory based on clear contract terms.
- Offer ongoing technical support and continue to work with managers to streamline the vending program based on key performance metrics.

### **COSTS**

While the savings potential of point-of-use vending is proven, it is important for manufacturers to understand the costs associated with a vending program. Different vendors offer different pricing models: some will install the machines at no charge, while some lease the equipment to their customers. Manufacturers should be aware that even if vendors offer the machines at no charge, those costs are recouped somehow—perhaps by requiring the manufacturer to purchase a certain volume of product or by increasing the price of the products once the vending program is in place. Rather than focusing solely on the up-front expense of the equipment, manufacturers should look for a vendor that offers transparency in terms of costs at every step.

## V. Conclusion: POU Vending and the Future of Inventory Management

POINT-OF-USE VENDING HARNESSSES THE POWER OF THE INDUSTRIAL INTERNET TO ALLEVIATE SOME OF THE PAIN ASSOCIATED WITH INVENTORY MANAGEMENT.



The rise of cloud-based technologies offers new ways to connect the words myriad machines with advanced controls and software applications—a connectivity that we increasingly expect, and which will continue to revolutionize the way that business is done. Vending leverages the possibilities of this connectivity for manufacturing by combining smart machines with data analytics to maximize efficiency and minimize inventory-related costs. Vending connects manufacturers with a profitable future.

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